

In the Claims:

1. (Currently amended) A grid computing system, comprising:

a grid comprising one or more compute nodes each already configured to participate in the grid with current executable software to perform one or more compute jobs;

a master node configured to manage the grid; and

a node, wherein when the node is not configured with the current executable software to perform one or more compute jobs to participate in the grid as a compute node, the node is configured to:

discover the master node in accordance with one or more peer-to-peer platform protocols; and

in response to said discovering the master node, send information about the node to the discovered master node in accordance with the one or more peer-to-peer platform protocols;

wherein the master node is further configured to, in response to said information about the node, send grid configuration information to the node in accordance with the one or more peer-to-peer platform protocols; and

wherein the node is further configured to, in response to said grid configuration information received from the discovered master node, self-configure as a compute node in the grid in accordance with the grid configuration information, wherein after self-configuring as a compute node the node is configured with the current executable software to perform one or more compute jobs in the grid.

2. (Previously presented) The grid computing system as recited in claim 1, wherein the node comprises a bootstrapping mechanism configured to discover the master node and to send information about the node to the discovered master node in accordance with the one or more peer-to-peer platform protocols at startup of the node.

3. (Original) The grid computing system as recited in claim 1, wherein the node was previously configured as a compute node, and wherein, to self-configure as a compute node in the grid in accordance with the grid configuration information, the node is further configured to update configuration of the node as a compute node in accordance with the grid configuration information.

4. (Original) The grid computing system as recited in claim 1,

wherein the information about the node includes compute node configuration information for the node;

wherein the master node is further configured to determine from the compute node configuration information that the compute node configuration needs to be updated; and

wherein the grid configuration information sent to the node includes update information for the compute node configuration.

5. (Original) The grid computing system as recited in claim 1, wherein the node is further configured to send the master node notification that the node is leaving the grid in accordance with the one or more peer-to-peer platform protocols.

6. (Original) The grid computing system as recited in claim 1, wherein the master node is further configured to:

submit a job to the node for execution in accordance with the one or more peer-to-peer platform protocols;

detect that the node is no longer participating as a compute node in the grid in accordance with the one or more peer-to-peer platform protocols; and

resubmit the job to another compute node of the grid for execution in accordance with the one or more peer-to-peer platform protocols.

7. (Original) The grid computing system as recited in claim 1, wherein the grid computing system further comprises a job submitter node, and wherein the master node is further configured to:

receive a job from the job submitter node in accordance with the one or more peer-to-peer platform protocols;

distribute the job to the compute node for execution in accordance with the one or more peer-to-peer platform protocols;

receive results of the execution from the compute node in accordance with the one or more peer-to-peer platform protocols; and

send the results to the job submitter node in accordance with the one or more peer-to-peer platform protocols.

8. (Original) The grid computing system as recited in claim 1, wherein the grid computing system is configured according to Sun Cluster Grid architecture.

9. (Original) The grid computing system as recited in claim 1, wherein the peer-to-peer platform protocols are JXTA protocols.

10. (Currently amended) A grid computing system, comprising:

a plurality of nodes, wherein one or more of the nodes are each already configured to participate in the grid with current executable software to perform one or more compute jobs; and

a master node configured to communicate with one or more of the plurality of nodes not configured with the current executable software to perform one or more compute jobs to participate in the grid as compute nodes in accordance with one or more peer-to-peer platform protocols to:

configure the one or more of the plurality of nodes with the current executable software to perform one or more compute jobs to participate as compute nodes in the grid computing system; and

submit jobs to the compute nodes for execution.

11. (Original) The grid computing system as recited in claim 10, further comprising one or more job submitter nodes, wherein the master node is further configured to:

receive the jobs from the job submitter nodes in accordance with the one or more peer-to-peer platform protocols;

receive results of the execution of the jobs from the compute nodes in accordance with the one or more peer-to-peer platform protocols; and

send the results to the job submitter nodes in accordance with the one or more peer-to-peer platform protocols.

12. (Original) The grid computing system as recited in claim 10, wherein the

grid computing system is configured according to Sun Cluster Grid architecture.

13. (Original) The grid computing system as recited in claim 10, wherein the peer-to-peer platform protocols are JXTA protocols.

14. (Currently amended) A node, comprising:

a processor; and

a memory comprising program instructions, wherein the program instructions are executable by the processor to:

when the node is not configured with current executable software to perform one or more compute jobs to participate in a grid as a compute node, discover a master node in accordance with one or more peer-to-peer platform protocols, wherein the master node is configured to manage the grid, wherein the grid comprises one or more compute nodes already configured with the current executable software to perform one or more compute jobs to participate in the grid;

in response to said discovering the master node, send information about the node to the discovered master node in accordance with the one or more peer-to-peer platform protocols;

receive grid configuration information from the master node in accordance with the one or more peer-to-peer platform protocols; and

in response to said received grid configuration information, self-configure as a compute node in the grid in accordance with the grid configuration information, wherein after self-configuring as a

compute node the node is configured with the current executable software to perform one or more compute jobs in the grid.

15. (Previously presented) The node as recited in claim 14, wherein the program instructions are executable by the processor to implement a bootstrapping mechanism configured to discover the master node and to send information about the node to the discovered master node in accordance with the one or more peer-to-peer platform protocols at startup of the node.

16. (Previously presented) The node as recited in claim 14, wherein the grid is configured according to Sun Cluster Grid architecture.

17. (Previously presented) The node as recited in claim 14, wherein the peer-to-peer platform protocols are JXTA protocols.

18. (Currently amended) A node, comprising:

means for discovering a master node when the node is not configured with current executable software to perform one or more compute jobs to participate in a grid as a compute node, wherein the master node is configured to manage the grid, wherein the grid comprises one or more compute nodes already configured with the current executable software to perform one or more compute jobs to participate in the grid;

means for obtaining grid configuration information from the master node in response to said discovering the master node; and

means for configuring as a compute node in the grid in response to the grid configuration information received from the discovered master node and in accordance with the grid configuration information, wherein after configuring as a compute node the node is configured with the current

executable software to perform one or more compute jobs in the grid.

19. (Currently amended) A method, comprising:

a node not currently configured with current executable software to perform one or more compute jobs to participate in a grid as a compute node discovering a master node in accordance with one or more peer-to-peer platform protocols, wherein the master node is configured to manage the grid, wherein the grid comprises one or more compute nodes already configured with the current executable software to perform one or more compute jobs to participate in the grid;

in response to said discovering the master node, the node sending information about the node to the discovered master node in accordance with the one or more peer-to-peer platform protocols;

in response to said information about the node, the master node sending grid configuration information to the node in accordance with the one or more peer-to-peer platform protocols; and

the node self-configuring as a compute node in the grid in response to the grid configuration information received from the discovered master node and in accordance with the grid configuration information, wherein after self-configuring as a compute node the node is configured with the current executable software to perform one or more compute jobs in the grid.

20. (Original) The method as recited in claim 19, wherein the node was previously configured as a compute node, and wherein said self-configuring as a compute node in the grid comprises updating configuration of the node as a compute node in accordance with the grid configuration information.

21. (Previously presented) The method as recited in claim 19, wherein the information about the node includes compute node configuration information for the node, the method further comprising:

the master node determining that the compute node configuration needs to be updated from the compute node configuration information; and

the master node including update information for the compute node configuration in the grid configuration information sent to the node in response to said determining that the compute node configuration needs to be updated.

22. (Original) The method as recited in claim 19, further comprising the node sending the master node notification that the node is leaving the grid in accordance with the one or more peer-to-peer platform protocols.

23. (Original) The method as recited in claim 22, further comprising:

the master node submitting a job to the node for execution in accordance with the one or more peer-to-peer platform protocols;

the master node detecting that the node is no longer participating as a compute node in the grid in accordance with the one or more peer-to-peer platform protocols; and

the master node resubmitting the job to another compute node of the grid for execution in accordance with the one or more peer-to-peer platform protocols.

24. (Original) The method as recited in claim 19, further comprising:

the master node receiving a job from a job submitter node in accordance with the

one or more peer-to-peer platform protocols;

the master node distributing the job to the compute node for execution in accordance with the one or more peer-to-peer platform protocols;

the master node receiving results of the execution from the compute node in accordance with the one or more peer-to-peer platform protocols; and

the master node sending the results to the job submitter node in accordance with the one or more peer-to-peer platform protocols.

25. (Original) The method as recited in claim 19, wherein the grid is configured according to Sun Cluster Grid architecture.

26. (Original) The method as recited in claim 19, wherein the peer-to-peer platform protocols are JXTA protocols.

27. (Currently amended) A computer-accessible storage medium, ~~comprising~~ storing program instructions, wherein the program instructions are computer-executable to implement:

a node not currently configured with current executable software to perform one or more compute jobs to participate in a grid as a compute node discovering a master node in accordance with one or more peer-to-peer platform protocols, wherein the master node is configured to manage the grid, wherein the grid comprises one or more compute nodes already configured with the current executable software to perform one or more compute jobs to participate in the grid;

in response to said discovering the master node, the node sending information about the node to the discovered master node in accordance with the one

or more peer-to-peer platform protocols;

in response to said information about the node, the master node sending grid configuration information to the node in accordance with the one or more peer-to-peer platform protocols; and

the node self-configuring as a compute node in the grid in response to the grid configuration information received from the discovered master node and in accordance with the grid configuration information, wherein after self-configuring as a compute node the node is configured with the current executable software to perform one or more compute jobs in the grid.

28. (Previously presented) The computer-accessible storage medium as recited in claim 27, wherein the node was previously configured as a compute node, and wherein, in said self-configuring as a compute node in the grid, the program instructions are further computer-executable to implement updating configuration of the node as a compute node in accordance with the grid configuration information.

29. (Previously presented) The computer-accessible storage medium as recited in claim 27, wherein the information about the node includes compute node configuration information for the node, and wherein the program instructions are further computer-executable to implement:

the master node determining that the compute node configuration needs to be updated from the compute node configuration information; and

the master node including update information for the compute node configuration in the grid configuration information sent to the node in response to said determining that the compute node configuration needs to be updated.

30. (Previously presented) The computer-accessible storage medium as recited in

claim 27, wherein the program instructions are further computer-executable to implement the node sending the master node notification that the node is leaving the grid in accordance with the one or more peer-to-peer platform protocols.

31. (Previously presented) The computer-accessible storage medium as recited in claim 30, wherein the program instructions are further computer-executable to implement:

the master node submitting a job to the node for execution in accordance with the one or more peer-to-peer platform protocols;

the master node detecting that the node is no longer participating as a compute node in the grid in accordance with the one or more peer-to-peer platform protocols; and

the master node resubmitting the job to another compute node of the grid for execution in accordance with the one or more peer-to-peer platform protocols.

32. (Previously presented) The computer-accessible storage medium as recited in claim 27, wherein the program instructions are further computer-executable to implement:

the master node receiving a job from a job submitter node in accordance with the one or more peer-to-peer platform protocols;

the master node distributing the job to the compute node for execution in accordance with the one or more peer-to-peer platform protocols;

the master node receiving results of the execution from the compute node in accordance with the one or more peer-to-peer platform protocols; and

the master node sending the results to the job submitter node in accordance with the one or more peer-to-peer platform protocols.

33. (Previously presented) The computer-accessible storage medium as recited in claim 27, wherein the grid is configured according to Sun Cluster Grid architecture.

34. (Previously presented) The computer-accessible storage medium as recited in claim 27, wherein the peer-to-peer platform protocols are JXTA protocols.

35. – 143. (Canceled)